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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,984	09/27/2005	Fuquan Zeng	10076-N2459-APP	9239
23456 7590 03/29/2010 WADDEY & PATTERSON, P.C. 1600 DIVISION STREET, SUITE 500 NASHVILLE, TN 37203			EXAMINER YAGER, JAMES C	
			ART UNIT	PAPER NUMBER
			1794	
			NOTIFICATION DATE	DELIVERY MODE
			03/29/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/530,984	Applicant(s) ZENG, FUQUAN	
	Examiner JAMES YAGER	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-20, 57, 58 and 60-67 is/are pending in the application.
- 4a) Of the above claim(s) 64-67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-20, 57, 58 and 60-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed 23 December 2009 has been entered. Claims 18-20, 57, 58 and 60-67 are pending in the application. The rejections of record from the office action 26 August 2009 not repeated herein have been withdrawn.

Election/Restrictions

2. Newly submitted claims 64-67 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 64-67 are directed to a process for producing an article.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 64-67 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

As set forth in the office action dated 05 August 2008:

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

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In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-8, 13-17, 21, 26, 31, 36 and 41, drawn to a process of manufacturing a container.

Group II, claim(s) 9-12, 22-25, 27-30, 32-35, 37-40 and 42-45, drawn to a method of making a blow molded bottle.

Group III, claim(s) 18-20, 46, 47, 56 and 57, drawn to an article (container).

Group IV, claim(s) 48-55, drawn to an article (blow molded).

The inventions listed as Groups I-IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The special technical feature is a container comprising polyethylene terephthalate and a colorant. The special technical feature is not novel as evidenced by Zhao et al. (US 6,423,764), which teaches a container comprising polyethylene terephthalate and a colorant (C1/L30-35 and C2/L49-53).

During a telephone conversation with Ms. Emily Shouse on 17 July 2008 a provisional election was made with traverse to prosecute the invention of Group III.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 18, 57, 60, 61 and 63 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhao et al. (US 6,423,764).

Regarding claims 18, 57, 60, 61 and 63, Zhao discloses a bottle made of polyethylene terephthalate (C1/L30-35, C7/L25-30) comprising a poly(oxyalkene) polymeric colorant comprising anthraquinone (C5/L30-35) (i.e. a disperse dye having a chemical affinity for polyethylene terephthalate; anthraquinone; a colored article comprising an additive having a chemical affinity for the article bound to at least the surface of the article). Given that Zhao discloses colorant that is anthraquinone as presently claimed, it is clear that the anthraquinone will inherently have chemical affinity for polyethylene terephthalate as presently claimed.

Although Zhao does not disclose an article produced by the process as claimed, it is noted that “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”, *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Further, “although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). See MPEP 2113.

Therefore, absent evidence of criticality regarding the presently claimed process and given that Zhao meets the requirements of the claimed product, Zhao clearly meet the requirements of present claim 18, 60, 61 and 63.

Given that the limitation “a specific region” and “regioselectively contacted” encompasses (i.e. does not exclude) the entire container, it is the Examiner's position that Zhao meets any structural limitations imparted by this process limitation since the colorant will be bound throughout the entire container.

Given that the limitation “contacted with said one or more disperse dyes in the liquid medium for a period of time between 10 seconds and 15 minutes” encompasses (i.e. does not exclude) contacting and remaining in contact permanently, it is the Examiner's position that Zhao meets any structural limitations imparted by this process limitation since the colorant contacts permanently.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 18-20 and 57, 58 and 60-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luka et al. (6,393,803) in view of Zhao et al. (US 6,423,764).

Regarding claims 18-20, 57, 58 and 60-63, Luka discloses coating a container made of polyethylene terephthalate (C4/L6-7) on the exterior surface with a colorant (C3/L65-67). Luka does not specifically disclose that the colorant has a chemical affinity for polyethylene terephthalate.

Zhao discloses a bottle made of polyethylene terephthalate (C1/L30-35, C7/L25-30) comprising a poly(oxyalkene) polymeric colorant comprising anthraquinone (C5/L30-35) (i.e. a disperse dye having a chemical affinity for polyethylene terephthalate; anthraquinone). Zhao further discloses that the poly(oxyalkene) polymeric colorant comprising anthraquinone provides effective and stable colorations to thermoplastic resins, are easily handled and exhibit desirable migration properties (C4/66-C5/L2). Given that Zhao discloses colorant that is anthraquinone as presently claimed, it is clear that the anthraquinone will intrinsically have chemical affinity for polyethylene terephthalate as presently claimed.

Luka and Zhao are analogous are because both teach about polyethylene terephthalate containers comprising a colorant. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the poly(oxyalkene) polymeric colorant comprising anthraquinone of Zhao as the colorant for coating the bottle of Luka to provide a bottle with a colorant that provides effective and stable coloration, is easily handled and exhibits desirable migration properties.

Examiner notes that since Luka in combination with Zhao discloses a molded polyethylene terephthalate container as presently claimed and further given that Zhao discloses that anthraquinone has migration properties, it is clear that the anthraquinone would intrinsically be bound below the surface of the container as the result of migration as presently claimed.

Regarding claims 18 and 60-63, although modified Luka does not disclose an article produced by the process as claimed, it is noted that “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”, *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Further, “although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). See MPEP 2113.

Therefore, absent evidence of criticality regarding the presently claimed process and given that modified Luka meets the requirements of the claimed product, modified Luka clearly meet the requirements of present claims 18 and 60-63.

Given that Luka discloses coating the exterior surface, it is the Examiner's position that the dye is bound to a specific region of the polyethylene terephthalate container (i.e. the exterior surface) and is bound predominantly to an outside surface of

the container and the container is regioselectively contacted with the dye and therefore meets any structural limitations imparted by this process limitation.

Given that the limitation "contacted with said one or more disperse dyes in the liquid medium for a period of time between 10 seconds and 15 minutes" encompasses (i.e. does not exclude) contacting and remaining in contact permanently, it is the Examiner's position that modified Luka meets any structural limitations imparted by this process limitation since the colorant contacts permanently.

Response to Arguments

8. Applicant's arguments filed 23 December 2009 have been fully considered but they are not persuasive.

Applicant argues that the process of claim 1 will not produce uniform color throughout the bulk of the polyester and that a product produced by melt-processing plastic and colorant will be different from a product produced by contacting the plastic with disperse dye in a liquid medium because the coloring material will be intermingled with the polymer chains in a different manner.

Examiner disagrees that the process of claim 1 is limited to articles having non-uniform color throughout. Given that the process of claim 1 encompasses contacting the article with the dye at any concentration, for any period of time, which includes contacting under conditions sufficient to completely saturate the container, thereby producing a container having uniform color throughout, it is the Examiner's position that

the process limitations of claim 1 do not impart a structural limitation that the article have non-uniform color throughout and therefore does not exclude articles as disclosed by Zhao having uniform color throughout. Applicant has not provided evidence to the contrary.

While applicant argues that a product produced by melt-processing plastic and colorant will be different from a product produced by contacting the plastic with disperse dye in a liquid medium because the coloring material will be intermingled with the polymer chains in a different manner, Applicant does provide any evidence to support this assertion.

Additionally, it is noted that “the arguments of counsel cannot take the place of evidence in the record”, *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the Examiner’s position that the arguments provided by the applicant regarding whether the process of claim 1 will not produce uniform color throughout the bulk of the polyester and whether a product produced by melt-processing plastic and colorant will be different from a product produced by contacting the plastic with disperse dye in a liquid medium because the coloring material will be intermingled with the polymer chains in a different manner must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), “the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001”.

Applicant argues that the dye of Zhao does not have a chemical affinity for polyethylene terephthalate.

First, given that the dye of Zhao is able to be mixed into and remain in the PET, it is clear that the dye of Zhao has at least some affinity for PET.

Second, given that Zhao discloses colorant that is anthraquinone as presently claimed, it is clear that the anthraquinone dye will inherently have chemical affinity for polyethylene terephthalate as presently claimed. Applicant provides no evidence to the contrary.

It is noted that “the arguments of counsel cannot take the place of evidence in the record”, *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner’s position that the arguments provided by the applicant regarding whether the dye of Zhao does not have a chemical affinity for polyethylene terephthalate must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), “the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001”.

Applicant argues that the combination of Luka and Zhao is made with impermissible hindsight.

In response to applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a

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reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant argues that there is no motivation to combine Zhao with Luka.

As set forth above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the poly(oxyalkene) polymeric colorant comprising anthraquinone of Zhao as the colorant for coating the bottle of Luka to provide a bottle with a colorant that provides effective and stable coloration, is easily handled and exhibits desirable migration properties.

Applicant argues that there is no teaching in Zhao to suggest providing the colorant in liquid medium and contacting with a PET container to produce a colored article.

First, it is noted that “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”, *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Further, “although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). See MPEP 2113.

Second, note that while Zhao does not disclose all the features of the present claimed invention, Zhao is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely use the poly(oxyalkene) polymeric colorant comprising anthraquinone that provides effective and stable coloration, is easily handled and exhibits desirable migration properties, and in combination with the primary reference, discloses the presently claimed invention.

Applicant argues that the dye of Zhao is selected on the basis of its ability to not reduce the intrinsic viscosity.

The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Applicant argues that Zhao teaches away from the combination.

Applicant provides no explanation or evidence of how Zhao teaches away from the invention.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES YAGER whose telephone number is (571)270-3880. The examiner can normally be reached on Mon - Fri, 7:30am-5pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY 3/19/10

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1794